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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,249	03/26/2004	Christopher J. Clements	25307A	1641
22889	7590	02/23/2006	EXAMINER	
OWENS CORNING 2790 COLUMBUS ROAD GRANVILLE, OH 43023			AN, SANG WOOK	
			ART UNIT	PAPER NUMBER
			1732	
DATE MAILED: 02/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/811,249	<b>Applicant(s)</b> CLEMENTS, CHRISTOPHER J.	
	<b>Examiner</b> Sang W. An	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/27/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Knutsson (US 20010011780). Knutsson teaches a method of forming a preform comprising the steps of: placing a binder on internal walls of a preform mold (par 0005, fig 1); adding continuous glass strands to said preform mold (par 0004 & 0005, fig 1); and curing said binder to bond glass fibers positioned adjacent to said internal walls together and form said preform (par 0005, fig 1), said bonded glass fibers forming an encapsulating shell of bound glass fibers surrounding unbound glass fibers within said preform (fig 1).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-10, 12, 13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knutsson (US 20010011780) in view of Golden et al (US 5317037).

Regarding claim 1, Knutsson teaches a method of forming a preform having a predetermined shape (abstract) comprising the steps of: feeding powder binder and glass fibers into a preform mold; heating said preform mold to a temperature sufficient to melt said binder, said melted binder adhering to said glass fibers to form binder-coated glass fibers; and cooling said preform mold to bind said binder-coated glass fibers together and form said preform (par 0005). However, Knutsson does not teach using sugar as the binding material. Nevertheless, Golden et al teach using sugar as a binder for forming glass fiber composite (col 3 lines 29-44). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use sugar as the binder in Knutsson's method of forming a preform in order to produce a biodegradable material (abstract).

Regarding claim 2, Knutsson teaches glass fibers that are continuous glass strands (par 0004).

Regarding claim 3 and 15, Knutsson teaches texturizing said continuous glass strands by separating said continuous glass strands into individual glass fibers prior to feeding said continuous glass strands into said preform mold (par 0005 & 0012).

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Regarding claim 4, Knutsson teaches that continuous glass strands and sugar are simultaneously fed into said preform mold (claim 2).

Regarding claim 5, Knutsson teaches that the predetermined shape of the preform has a shape corresponding to a shape of an automobile muffler (abstract).

Regarding claim 6, Knutsson teaches removing said preform from the preform mold (par 0005).

Regarding claims 7 and 12, Knutsson is silent about the sugar having a melting point of 130°F or greater. However, Golden et al teach using sugar binder with melting temperature in the range of 248 °F to 347 °F (col 3 lines 29-44). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Golden et al's teaching in Knutsson's method of forming a preform in order to form a biodegradable material (abstract).

Regarding claim 8, Knutsson teaches that a preform mold is perforated (par 0005).

Regarding claim 9, Knutsson teaches that the heating step comprises passing heated air through said preform mold for a period of time sufficient to at least partially caramelize said Sugar (par 0016).

Regarding claim 10, Knutsson teaches that the cooling step comprises passing cool air through said preform mold (par 0005).

Regarding claim 13, Knutsson teaches heating the preform mold to a temperature sufficient to at least partially melt said sugar (par 0016), said melted sugar adhering to said glass fibers to form sugar-coated glass fibers (par 0005); and cooling

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said preform mold to bind said sugar-coated glass fibers together and form the preform (par 0005).

Regarding claim 16, Knutsson teaches removing said preform from said preform mold (par 0005).

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knutsson (US 20010011780) in view of Golden et al (US 5317037) further in view of Kirk (US 6319444). Knutsson in view of Golden et al teaches everything mentioned above including using sugar as the binder but does not teach heating said preform mold prior to placing the binder material on the internal walls. However, Kirk teaches preheating the mold prior to the molding process (col 8 lines 1-3). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Kirk's teachings in Knutsson's method of forming a preform in view of Golden et al in order to reduce the wait time required to heat up the mold.

***Response to Argument***

The applicant's election with traverse of Claims 1-16 in the reply filed on 1-17-2006 is acknowledged. The traversal is on the grounds that there is no undue burden to examine both the process and apparatus. This is not found persuasive because the preform of the Group II claims could be used in a materially different process. For example, the preform can be made with binder fibers or synthetic resin rather than sugar. Alternatively, the preform can be made by a process known as resin transfer molding (see US 5,733,494 for specific manipulative steps).

The requirement is still deemed proper and is therefore made FINAL.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 7 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sang Wook An  
Patent Examiner  
Art Unit 1732  
February 15, 2006



**MICHAEL P. COLAIANNI**  
SUPERVISORY PATENT EXAMINER